Author Index

Albarrán, J. L., 217
Anestiev, L. A., 131
Bevolo, A. J., 69
Blank, E., L17
Boldú, J. L., 217
Byrne, J. G., L27

Cao, WD., 151, 165
Carrillo, E., 217
Cavaille, J. Y., 223
Chaturvedi, M. C., 187
Chen, S., L9
Chokshi, A. H., 49
Colwell, R., L39
Cota, L., 217

Dahms,	M., L5
Doi, M.	, 175

Earthman, J. C., 103
Eggeler, G., 103
El Bari, H., 223

Farid, Z. M., L31	
Fuentes, J., 217	

G'Sell, C., 223
Gadaud, P., L1
Gibson, L. J., 1
Gottstein, G., L9
Gupta, A. K., 187

Hong, S. I., 125, L23	
Ilschner, B., 103	
Jena, A. K., 187 Johari, G. P., 223	
Kisdi-Koszó, E., L13 Krotz, P. D., 37 Kschinka, B. A., 89 Kučera, J., 209 Kutumbarao, V. V., 193	
Laabs, F. C., 37 Laird, C., 115, L23 Langer, E. W., 203 Lu, XP., 151, 165	
Mahmoud, S. A., L31 Martínez, L., 217	

N	nanmoud, S. A., L31
N	Martínez, L., 217
N	Mendoza, A., 217
N	Million, B., 209
N	liyazaki, T., 175
N	Morris, D. G., 139
N	Morris, M. A., 139
N	Mukherjee, A. K., 49

Perez, J., 223
Pérez, R., 218

Orozco, E., 217 Owen, C. V., 69

Pérez-Ramírez, J. G., 217
Peters, K. F., 115
Peterson, D. T., L27
Pierantoni, M., L17
Prantl, W., 61
Putatunda, S. K., L39
, ,

D 11 1 115
Radin, A., 115
Radin, S., 115
Rao, P. R., 193
Rao, Y. K. M., 193
Rittel, D., 77
Roman, I., 77

Saleh, S., L31
Schrank, J., 61
Schulgasser, K., L35
Spis, A., L39
Spitzig, W. A., 37, 69
Stránský, K., 209
Stubbins, J. F., 89
Stüwe, H. P., 61

Vázquez, L., 217
Vértesy, Z., L13
Vřešťál, J., 209

Wagniere, J. D., L17
Woirgard, J., L1

Subject Index

Alloying

improvement in the surface properties of Al-Si cast alloys by laser surface alloying, L17

Allovs

cavitation and fracture characteristics of a superplastic Al-Cu-Li-Zr alloy, 49

effect of 0.23 wt.% Si on precipitation in the Al-1.52wt.%Cu-0.74wt.%Mg alloys, 187

improvement in the surface properties of Al-Si cast alloys by laser surface alloying, L17

influence of dynamic strain aging on the transition of creep characteristics of a solid solution alloy at various temperatures, 125

influence of microstructure on void nucleation and growth in a near- α titanium alloy IMI 685, 193

influence of single overload on corrosion fatigue crack growth behavior of a low alloy steel, L35

Aluminium

cavitation and fracture characteristics of a superplastic Al-Cu-Li-Zr alloy, 49

effect of 0.23 wt.% Si on precipitation in the Al-1.52wt.%Cu-0.74wt.%Mg alloys, 187

formation of titanium aluminides by heat treatment of extruded elemental powders, L5

improvement in the surface properties of Al-Si cast alloys by laser surface alloying, L17

Austenitization

effects of high temperature austenitization on fracture, fatigue and stress corrosion cracking behavior of cast and forged high strength steels

I: monotonic fracture behavior, 151

II: fatigue and stress corrosion cracking behavior, 165

Bainite

creep-fatigue-environment interaction in a bainitic 2.25wt.%Cr-1wt.%Mo steel forging, 89

Barium

grain and void growth in the superconductor GdBa₂-Cu₃O_{7-x}, 217

Bifurcations

shape bifurcations in the coarsening of precipitates in elastically constrained systems, 175

Brasses

grain boundary internal fraction peak of \alpha-brasses, L31

Carbon

concentration dependence of the diffusivity of carbon in $(\gamma\text{-Fe})$ -C and in Ni-C solid solutions, 209

effect of plastic deformation on the microstructure and properties of amorphous polycarbonate, 223

relationship between stiffness and thermal expansion of carbon fibres, L39

Cavitation

cavitation and fracture characteristics of a superplastic Al-Cu-Li-Zr alloy, 49

Cellular materials

modelling the mechanical behavior of cellular materials, 1

Chromium

creep-fatigue-environment interaction in a bainitic 2.25wt.%Cr-1wt.%Mo steel forging, 89

deformation and damage processes in a 12%Cr-Mo-V steel under high temperature low cycle fatigue conditions in air and vacuum, 103

effect of hydrogen on the strength and ductility of V-15at.%Cr-5at.%Ti, 69

Composites

high temperature properties of heavily deformed Cu-20%Nb and Cu-20%Ta composites, 37

Copper

cavitation and fracture characteristics of a superplastic Al-Cu-Li-Zr alloy, 49

creep and fatigue interaction in polycrystalline copper cycled under compressive mean stresses, 115

effect of 0.23 wt.% Si on precipitation in the Al-1.52wt.%Cu-0.74wt.%Mg alloys, 187

formation and penetration of the molten copper-rich phase iron with the addition of nickel and tin, 203

grain and void growth in the superconductor $GdBa_2$ - Cu_3O_{7-x} , 217

high tempeature properties of heavily deformed Cu-20%Nb and Cu-20%Ta composites, 37

influence of crystal orientation on the fatigue softening behaviour of severely predeformed copper, 61

recovery in low-cycle-fatigued copper single crystals, L9

Corrosion

influence of single overload on corrosion fatigue crack growth behavior of a low alloy steel, L35

Crack growth

influence of single overload on corrosion fatigue crack growth behavior of a low alloy steel, L35

Cracking

control of fatigue crack initiation mode and fatigue life of α -Fe, L23

effects of high temperature austenitization on fracture, fatigue and stress corrosion cracking behavior of cast and forged high strength steels

I: monotonic fracture behavior, 151

II: fatigue and stress corrosion cracking behavior, 165

Creep

creep and fatigue interaction in polycrystalline copper cycled under compressive mean stresses, 115

creep-fatigue-environment interaction in a bainitic 2.25wt.%Cr-1wt.%Mo steel forging, 89

influence of dynamic strain aging on the transition of creep characteristics of a solid solution alloy at various temperatures, 125

Crystal orientation

influence of crystal orientation on the fatigue softening behaviour of severely predeformed copper, 61

Damage

deformation and damage processes in a 12%Cr-Mo-V steel under high temperature low cycle fatigue conditions in air and vacuum, 103

Deformation

deformation and damage processes in a 12%Cr-Mo-V steel under high temperature low cycle fatigue conditions in air and vacuum, 103

effect of plastic deformation on the microstructure and properties of amorphous polycarbonate, 223

high temperature properties of heavily deformed Cu-20%Nb and Cu-20%Ta composites, 37

influence of crystal orientation on the fatigue softening behaviour of severely predeformed copper, 61

tensile deformation of coarse-grained cast austenitic manganese steels, 77

Diffusivity

concentration dependence of the diffusivity of carbon in $(\gamma\text{-Fe})$ -C and in Ni-C solid solutions, 209

Domain structure

mechanical stress and time dependence effect on the domain structure of metallic glasses, L13

Doppler broadening

Doppler-broadening positron annihilation technique for in-field non-destructive evaluation testing, L27

Ductility

effect of hydrogen on the strength and ductility of V-15at.%Cr-5at.%Ti, 69

Dynamic strain aging

influence of dynamic strain aging on the transition of creep characteristics of a solid solution alloy at various temperatures, 125

Fatigue

control of fatigue crack initiation mode and fatigue life of α -Fe, L23

creep and fatigue interaction in polycrystalline copper cycled under compressive mean stresses, 115

creep-fatigue-environment interaction in a bainitic 2.25wt.%Cr-1wt.%Mo steel forging, 89

deformation and damage processes in a 12%Cr-Mo-V steel under high temperature low cycle fatigue conditions in air and vacuum, 103

effects of high temperature austenitization on fracture, fatigue and stress corrosion cracking behavior of cast and forged high strength steels

I: monotonic fracture behavior, 151

II: fatigue and stress corrosion cracking behavior, 165

influence of crystal orientation on the fatigue softening behaviour of severely predeformed copper, 61

influence of single overload on corrosion fatigue crack growth behavior of a low alloy steel, L35

recovery in low-cycle-fatigued copper single crystals, L9

Forging

creep-fatigue-environment interaction in a bainitic 2.25wt.%Cr-1wt.%Mo steel forging, 89

effects of high temperature austenitization on fracture, fatigue and stress corrosion cracking behavior of cast and forged high strength steels

I: monotonic fracture behavior, 151

II: fatigue and stress corrosion cracking behavior, 165

Fracture

cavitation and fracture characteristics of a superplastic Al-Cu-Li-Zr alloy, 49

effects of high temperature austenitization on fracture, fatigue and stress corrosion cracking behavior of cast and forged high strength steels I: monotonic fracture behavior, 151

II: fatigue and stress corrosion cracking behavior, 165 iction

grain boundary internal friction peak of α -brasses, L31

Gadolinium

grain and void growth in the superconductor GdBa₂-Cu₃O_{7-x}, 217

Glasses

mechanical stress and time dependence effect on the domain structure of metallic glasses, L13

Grain growth

grain and void growth in the superconductor $GdBa_2$ - Cu_3O_{7-x} , 217

Heat transfer

analysis of heat and mass transfer and ribbon formation by rapid quenching from the melt, 131

Hydrogen

effect of hydrogen on the strength and ductility of V-15at.%Cr-5at.%Ti, 69

Interdiffusion

NiTi intermetallic by mixing, milling and interdiffusing elemental components, 139

Intermetallics

NiTi intermetallic by mixing, milling and interdiffusing elemental components, 139

Iron

concentration dependence of the diffusivity of carbon in $(\gamma\text{-Fe})\text{-C}$ and in Ni-C solid solutions, 209

control of fatigue crack initiation mode and fatigue life of α -Fe, L23

formation and penetration of the molten copper-rich phase in iron with the addition of nickel and tin, 203

Lithium

cavitation and fracture characteristics of a superplastic Al-Cu-Li-Zr alloy, 49

Magnesium

effect of 0.23 wt.% Si on precipitation in the Al-1.52wt.%Cu-0.74wt.%Mg alloys, 187

Manganese

tensile deformation of coarse-grained cast austenitic manganese steels, 77

Mass transfer

analysis of heat and mass transfer and ribbon formation by rapid quenching from the melt, 131

Milling

NiTi intermetallic by mixing, milling and interdiffusing elemental components, 139

Molybdenum

creep-fatigue-environment interaction in a bainitic 2.25wt.%Cr-1wt.%Mo steel forging, 89

deformation and damage processes in a 12%Cr-Mo-V steel under high temperature low cycle fatigue conditions in air and vacuum, 103

Nickel

concentration dependence of the diffusivity of carbon in $(\gamma\text{-Fe})\text{-C}$ and in Ni-C solid solutions, 209

formation and penetration of the molten copper-rich phase in iron with the addition of nickel and tin, 203

NiTi intermetallic by mixing, milling and interdiffusing elemental components, 139

Niobium

high temperature properties of heavily deformed Cu-20%Nb and Cu-20%Ta composites, 37

Point defects

point defect relaxation in silicon single crystals, L1

Polycarbonate

effect of plastic deformation on the microstructure and properties of amorphous polycarbonate, 223

Polycrystals

creep and fatigue interaction in polycrystalline copper cycled under compressive mean stresses, 115

Positron annihilation

Doppler-broadening positron annihilation technique for in-field non-destructive evaluation testing, L27

Precipitates

shape bifurcations in the coarsening of precipitates in elastically constrained systems, 175

Precipitation

effect of 0.23 wt.% Si on precipitation in the Al-1.52wt.%Cu-0.74wt.%Mg alloys, 187

Rapid quenching

analysis of heat and mass transfer and ribbon formation by rapid quenching from the melt, 131

Ribbon formation

analysis of heat and mass transfer and ribbon formation by rapid quenching from the melt, 131

Silicon

effect of 0.23 wt.% Si on precipitation in the Al-1.52wt.%Cu-0.74wt.%Mg alloys, 187

improvement in the surface properties of Al-Si cast alloys by laser surface alloying, L17

point defect relaxation in silicon single crystals, L1

Single crystals

point defect relaxation in silicon single crystals, L1 recovery in low-cycle-fatigued copper single crystals, L9 Steel

creep-fatigue-environment interaction in a bainitic 2.25wt.%Cr-1wt.%Mo steel forging, 89

deformation and damage processes in a 12%Cr-Mo-V steel under high temperature low cycle fatigue conditions in air and vacuum, 103

effects of high temperature austenitization on fracture, fatigue and stress corrosion cracking behavior of cast and forged high strength steels

I: monotonic fracture behavior, 151

II: fatigue and stress corrosion cracking behavior, 165

influence of single overload on corrosion fatigue crack growth behavior of a low alloy steel, L35

tensile deformation of coarse-grained cast austenitic manganese steels, 77

Stiffness

relationship between stiffness and thermal expansion of carbon fibres, L39

Stress

creep and fatigue interaction in polycrystalline copper cycled under compressive mean stresses, 115

effects of high temperature austenitization on fracture, fatigue and stress corrosion cracking behavior of cast and forged high strength steels

I: monotonic fracture behavior, 151

II: fatigue and stress corrosion cracking behavior, 165 mechanical stress and time dependence effect on the domain structure of metallic glasses, L13

Superconductors

grain and void growth in the superconductor GdBa₂-Cu₃O_{7-x}, 217

Tantalum

high temperature properties of heavily deformed Cu-20%Nb and Cu-20%Ta composites, 37

Thermal expansion

relationship between stiffness and thermal expansion of carbon fibres, L39

Tin

formation and penetration of the molten copper-rich phase in iron with the addition of nickel and tin, 203

Titanium

effect of hydrogen on the strength and ductility of V-15at.%Cr-5at.%Ti, 69

formation of titanium aluminides by heat treatment of extruded elemental powders, L5

influence of microstructure on void nucleation and growth in a near- α titanium alloy IMI 685, 193

NiTi intermetallic by mixing, milling and interdiffusing elemental components, 139

Vanadium

deformation and damage processes in a 12%Cr-Mo-V steel under high temperature low cycle fatigue conditions in air and vacuum, 103

effect of hydrogen on the strength and ductility of V-15at.%Cr-5at.%Ti, 69

Void growth

grain and void growth in the superconductor GdBa₂-Cu₃O_{7-x}, 217

Void nucleation

influence of microstructure on void nucleation and growth in a near- α titanium alloy IMI 685, 193

Zirconium

cavitation and fracture characteristics of a superplastic Al-Cu-Li-Zr alloy, 49

